

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
 )  
 John SANTHOFF et al. )  
 )  
 Serial No.: To be assigned )  
 )  
 Filed: November 25, 2003 )  
 )  
 For: BRIDGED ULTRA-WIDEBAND )  
 COMMUNICATION METHOD )  
 AND APPARATUS )

San Diego, California  
November 25, 2003

MAIL STOP PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir or Madam:

In accordance with 37 C.F.R. § 1.56, Applicants make the documents listed on the enclosed form PTO/SB/08 (submitted in duplicate) of record in the above-identified application. In accordance with 37 C.F.R. § 1.97, this statement is not to be construed as a representation that a search has been made, and is not a representation that the information cited is effective as prior art to the application or is material to patentability.

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this correspondence, and anything being referred to as enclosed herein, is being deposited with the United States Postal Service via Express Mail Post Office to Addressee Label No. EV292299615US, with sufficient postage in an envelope addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Date: November 25, 2003

By:

  
Gregory P. Austin

Copies of the foreign patent document and non-patent literature listed on the enclosed form PTO/SB/08 are enclosed.


Copies of the U.S. patents and U.S. patent application publications listed on the enclosed form PTO/SB/08 are not enclosed, in accordance with the waiver of the requirement of 37 C.F.R. § 1.98(a)(2)(i) for submitting a copy of each cited U.S. patent and U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 that appears in the Official Gazette Notice (Week No. 31) dated August 5, 2003 and entitled "Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications Filed After June 30, 2003".

It is respectfully requested that the documents listed on the enclosed form PTO/SB/08 be (1) fully considered by the U.S. Patent and Trademark Office in the examination of the above-identified application; and (2) printed on any patent which may issue on this application. It is also respectfully requested that a copy of the enclosed form PTO/SB/08, as considered and initialed by the Examiner, be returned to the undersigned with the next communication in accordance with M.P.E.P. § 609.

This Information Disclosure Statement is filed within three months of the filing date of the above-identified application, pursuant to 37 C.F.R. 1.97(b). Therefore, it is believed that no fee is required in connection with this submission. In the event that a fee is required, please charge our Deposit Account No. 50-2298, in the name of Luce, Forward, Hamilton & Scripps LLP.

Respectfully submitted,

11.25.03  
Date

  
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Attorney for Applicant(s)  
c/o LUCE, FORWARD, HAMILTON  
& SCRIPPS LLP  
11988 El Camino Real, Ste. 200  
San Diego, California 92130  
Telephone No.: (858) 720-6300

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO

*(use as many sheets as necessary)*

Sheet 1 of 4

**Complete if Known**

<b>Application Number</b>	To be assigned
<b>Filing Date</b>	November 25, 2003
<b>First Named Inventor</b>	John SANTHOFF et al.
<b>Art Unit</b>	To be assigned
<b>Examiner Name</b>	To be assigned
<b>Attorney Docket Number</b>	30287-110

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. 1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
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		US- 5,708,377	01/13/1998	BRADLEY	
		US- 5,714,954	02/03/1998	CHUNG ET AL.	
		US- 5,768,700	06/16/1998	KARDONTCHIK	

## FOREIGN PATENT DOCUMENTS

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Examiner  
Signature

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Considered

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		US- 6,078,277	06/20/2000	CHENG ET AL.	
		US- 6,087,871	07/11/2000	KARDO-SYSSOEV ET AL.	
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		US- 6,433,720 B1	08/13/2002	LIBOVE ET AL.	
		US- 6,539,213 B1	03/25/2003	RICHARDS ET AL.	
		US- 6,580,902 B1	06/17/2003	SORRELLS ET AL.	
		US- 2001/0019313A1	09/02/2001	TAKAHASHI ET AL.	

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Examiner Signature	Date Considered
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Substitute for form 1449A/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	To be assigned
		Filing Date	November 25, 2003
		First Named Inventor	John SANTHOFF et al.
		Art Unit	To be assigned
		Examiner Name	To be assigned
Sheet 3 of 4	Attorney Docket Number	30287-110	

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		US- 2003/0048212A1	03/13/2003	Libove et al.	
		US- 2003/0161382 A1	08/28/2003	Hershey et al.	
		US- 5,793,413	08/11/1998	Hylton et al.	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

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		<b>Filing Date</b>	November 25, 2003
		<b>First Named Inventor</b>	John SANTHOFF et al.
		<b>Group Art Unit</b>	To be assigned
		<b>Examiner Name</b>	To be assigned
<b>Sheet</b> 4	<b>of</b> 4	<b>Attorney Docket Number</b>	30287-110

<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		FERNANDO RAMIREZ-MIRELES, "On Performance of Ultra Wideband Signals in Gaussian Noise and Dense Multipath," Paper 99C265, Accepted for Publication in the IEEE Transactions on Vehicular Technology, Pages 1-9.	
		FERNANDO RAMIREZ-MIRELES et al., "N-Orthogonal Time-Shift-Modulated Codes for Impulse Radio," Communication Sciences Institute, Department of Electrical Engineering-Systems, University of Southern California, Los Angeles, CA 90089-2565 USA, Pages 1-4.	
		HENNING F. HARMUTH, "Frequency-Sharing and Spread-Spectrum Transmission with Large Relative Bandwidth," IEEE Transactions on Electromagnetic Compatibility, Vol. EMC-20, No. 1, February 1978, Pages 232-239.	
		HENNING F. HARMUTH, "Applications of Walsh functions in communications," IEEE Spectrum, November 1969, Pages 82-91.	
		AETHER WIRE & LOCATION, INC., ROBERT FLEMING et al., "Integrated, Low-Power, Ultra-Wideband Tranceivers for Distributed Position Location and Communication," Technical Abstracts of Proposal to Defense Advanced Research Projects Agency (DARPA), Part I - Technical Proposal, 1998, Pages 1-52.	
		AETHER WIRE & LOCATION, INC., ROBERT FLEMING et al., "Low-Power, Miniature, Distributed Position Location and Communication Devices Using Ultra-Wideband, Nonsinusoidal Communication Technology," Semi-Annual Technical Report Prepared for: ARPA/FBI, July 1995, Pages 1-40.	
		HENNING F. HARMUTH, "Fundamental Limits for Radio Signals with Large Bandwidth", IEEE Transactions on Electromagnetic Compatibility, February 1981, Vol. EMC-23, No. 1, Pages 37-43.	

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			<b>Filing Date</b>	November 25, 2003
			<b>First Named Inventor</b>	John SANTHOFF et al.
			<b>Art Unit</b>	To be assigned
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Sheet	1	of	4	

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Substitute for form 1449A/PTO

*(use as many sheets as necessary)*

Sheet	2	of	4
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<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>			
<b>Examiner Initials<sup>1</sup></b>	<b>Cite No.<sup>1</sup></b>	<b>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.</b>	<b>T<sup>2</sup></b>
		FERNANDO RAMIREZ-MIRELES, "On Performance of Ultra Wideband Signals in Gaussian Noise and Dense Multipath," Paper 99C265, Accepted for Publication in the IEEE Transactions on Vehicular Technology, Pages 1-9.	
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		HENNING F. HARMUTH, "Frequency-Sharing and Spread-Spectrum Transmission with Large Relative Bandwidth," IEEE Transactions on Electromagnetic Compatibility, Vol. EMC-20, No. 1, February 1978, Pages 232-239.	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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